

What is claimed is:

- 1 1. A method employed in an RF modem in dynamic assignment of a link address on an RF
2 connection, the RF connection connecting the RF modem with a head end, the link
3 address being used by the head end for forwarding of information from the head end
4 through the RF modem to at least one host that is connected to the RF modem, the
5 method comprising the steps performed in the RF modem of:
6 receiving the link address, the link address being assigned by the head end;
7 selecting a message that is carried on the RF connection based upon the link
8 address; and
9 forwarding the selected message to the at least one host.
- 1 2. The method of claim 1, wherein the link address comprises an identifier for a frequency
2 in the RF connection, the message being carried on the RF connection in an RF channel
3 associated with the frequency.
- 1 3. The method of claim 2, wherein the link address further comprises an identifier for a
2 plurality of time periods, the message being carried on the RF cable connection in the RF
3 channel during at least one time period of the plurality of time periods.
- 1 4. The method of claim 3, wherein each time period of the plurality of time periods is
2 relative to the start of a frame that is repetitively transmitted on the RF channel.
- 1 5. The method of claim 4, wherein the link address further comprises an identifier that is
2 matched with information in a header of the message before the message is forwarded to
3 the at least one host.
- 1 6. The method of claim 2, wherein the link address further comprises an identifier that is
2 matched with information in a header of the message before the message is forwarded to
3 the at least one host.

- 1 7. The method of claim 1, further comprising the steps of:
2 determining that the forwarding of information from the head end through the RF
3 modem to the at least one host has terminated; and
4 releasing the link address to the head end responsive to determining that the
5 forwarding of information has terminated.
- 1 8. The method of claim 7, wherein the releasing step further comprises sending a DHCP
2 (Dynamic Host Configuration Protocol) packet from the RF modem to the head end.
- 1 9. The method of claim 1, wherein the link address is received over a bidirectional link
2 during the receiving step.
- 1 10. The method of claim 9, wherein the bidirectional link is a PSTN (Public Switched
2 Telephone Network) link that is different from the RF connection.
- 1 11. The method of claim 1, wherein the received link address is received in a DHCP
2 (Dynamic Host Configuration Protocol) packet.
- 1 12. An apparatus for obtaining a dynamic assignment of a link address in an RF modem, the
2 RF modem connected to a head end over an RF connection, the link address being used
3 by the head end for forwarding of information from the head end through the RF modem
4 to at least one host that is connected to the RF modem, the apparatus comprising:
5 logic configured to receive the link address, the link address being assigned by
6 the head end;
7 logic configured to select a message that is carried on the RF connection based
8 upon the link address; and
9 logic configured to forward the selected message to the at least one host.
- 1 13. The apparatus of claim 12, wherein the link address comprises an identifier for a
2 frequency in the RF connection, the message being carried on the RF connection in an RF
3 channel associated with the frequency.

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- 1 14. The apparatus of claim 13, wherein the link address further comprises an identifier for a
2 plurality of time periods, the message being carried on the RF cable connection in the RF
3 channel during at least one time period of the plurality of time periods.
- 1 15. The method of claim 14, wherein each time period of the plurality of time periods is
2 relative to the start of a frame that is repetitively transmitted on the RF channel.
- 1 16. The apparatus of claim 15, wherein the link address further comprises an identifier that is
2 matched with information in a header of the message before the message is forwarded to
3 the at least one host.
- 1 17. The apparatus of claim 13, wherein the link address further comprises an identifier that is
2 matched with information in a header of the message before the message is forwarded to
3 the at least one host.
- 1 18. The apparatus of claim 12, further comprising:
2 logic configured to determine that the forwarding of information from the head
3 end through the RF modem to the at least one host has terminated; and
4 logic configured to release the link address to the head end responsive to
5 determining that the forwarding of information has terminated.
- 1 19. The apparatus of claim 18, wherein the logic configured to release the link address
2 further comprises logic configured to send a DHCP (Dynamic Host Configuration
3 Protocol) packet from the RF modem to the head end.
- 1 20. The apparatus of claim 12, wherein the logic configured to receive the link address is
2 further configured to receive the link address over a bidirectional link.
- 1 21. The apparatus of claim 20, wherein the bidirectional link is a PSTN (Public Switched
2 Telephone Network) link that is different from the RF connection.
- 1 22. The apparatus of claim 12, wherein the logic configured to receive a link address is
2 further configured to receive the link address in a DHCP (Dynamic Host Configuration
3 Protocol) packet.